MILLENNIUM CHALLENGE CORPORATION
UNITED STATES OF AMERICA

Malawi

MCC Learning from Final Performance Evaluation of the Power Sector Reform Project

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MCC has identified the following programmatic and evaluation lessons based on the Final Report for Evaluation of the Power Sector Reform Project (PSRP) of the Malawi Compact.

Programmatic lessons:
MCC identified the following lessons for the design of future power sector reform programs:

- ***Reform strategies should be appropriately attuned to the country context and level of development of the sector, such that priorities and proposed solutions respond to the most essential challenges.*** As the final evaluation shows, the PSRP was successful in assisting the Government of Malawi (GOM) in establishing a new power market structure, primarily by unbundling the generation business from ESCOM, which had existed as a vertically integrated electric utility. Coupled with other regulatory improvements, this led to an improved enabling environment, allowing a substantial number of potential investments in generation by private firms to move forward for the first time in Malawi. Nevertheless, the compact efforts dedicated specifically to unbundling of ESCOM were extensive, and the evaluation also noted that key aspects of the re-structuring were incomplete after the compact ended. From MCC's perspective, stakeholder attention directed at other critical challenges with the utility's core operations was inevitably diluted as a result. In particular, reforms that sought to strengthen ESCOM's role as a credible off-taker of power – such as tariff reforms, loss reduction, and accounting and financial management improvements – were not adequately implemented and the utility therefore continued to be perceived as a risk to investment by independent power producers. Moreover, ESCOM's unbundling led to unintended effects on earlier activities supporting ESCOM's overall turnaround, including inadvertent financial challenges as there were significant delays in the newly formed generation company coming to mutually acceptable power purchase arrangement with ESCOM (now focused solely on transmission and distribution), even after assuming some of its debts. In turn, this led to challenges with arrears in the sector and growing financial problems at ESCOM. All of these issues implied an ongoing need for financial backing from the Government for ESCOM in order to support investment, but this was slow to emerge.

  Further, the administrative processes associated with unbundling ESCOM took up significant time and effort which led to a reduction in the time available to support the

new activities introduced through the reform program related to expansion planning, robust generation procurement processes, and transparent operations of the power network. Once unbundled, the failure of the Government to rapidly create a single buyer, in particular, was an obstacle to moving forward in a robust manner with a program for investment in the power sector. These experiences of the project demonstrate that in selecting among a range of needs and challenges within Malawi's power sector, the unbundling of ESCOM could potentially have been deferred in lieu of more targeted efforts to improve its accountability and financial/operational performance, issues that may arguably have been more central to achieving a sustainable and expanding power sector. Further, substantive outcomes such as improved expansion planning, better organization and transparency in procurement of new generation, and more robust operations of the power system which were targeted through the market restructuring process may have been possible to address without the friction created by the unbundling process.

MCC is applying this lesson by focusing more on implementing activities aimed at increasing private investment in the power sector without necessarily prioritizing the structural reorganization of the utility. In Benin, MCC is supporting the competitive procurement of IPPs from project development to tendering to help address challenges in securing private sector participation in generation. This approach recognizes that a focus on the process of securing investment is a critical part of achieving intended outcomes. In Burkina Faso, planned work to support enabling environment reforms is bolstered by support for system operations personnel to ensure they can manage the changing operational environment without necessarily prioritizing the unbundling of the electric utility. In addition, MCC continues to support efforts to achieve cost-recovery and financial viability of the power sector through a focus on tariff reforms and government backing for critical investment.

- ***Efforts to upgrade utility information systems should be started early on in the compact term to account for the length of time required for successful rollout, adoption, and continued system support.*** During the PSRP, the procurement of a management information system (MIS) for ESCOM was temporarily held back in the second year of the program in order to incentivize broader management-level reforms across several of the utility's business units. Even with this modest delay to the timeline, the design and deployment of the system ultimately moved forward and was able to launch within ESCOM during the final year of the compact. However, despite this initial success, the evaluation found that overall delays to rollout of the MIS left inadequate time for further implementation. Consequently, various challenges and deficiencies emerged shortly after the original 'go-live' date whereby critical modules did not function properly, uptake across ESCOM teams was inconsistent, and critical financial data could not be reliably produced. Given the common challenges of upgrading the information technology (IT) of many complex organizations, the design of any similar system should account for the substantial time and effort required for all phases of the project, including design, training, rollout, and long-term support. Further, such initiatives would benefit from a more realistic assessment of the absorptive capacity of the host institutions for the large-scale change associated

with major IT projects. The introduction of new IT systems requires, among other issues, strong buy-in and focus from leadership which is commonly in short supply. In such cases, project teams should consider a more limited scope and/or an incremental, modular approach to strengthening the IT environment rather than an enterprise-wide effort.

MCC is applying this lesson by working to complete the needs assessment, identification of requirements and design of IT projects, if any, prior to the entry into force of the compact, and ensuring that the utility contracts not only for the installation of an IT project but also the long-term support for it.

- ***Compact programming must recognize the challenges inherent in utility turnaround and dedicate sufficient resources and time with appropriate methodologies to achieve sustainable results.*** Achieving a utility turnaround is extremely difficult, requiring sustained efforts over many years across key dimensions, including operations, financial management, regulatory relations, and governance at all levels from Board to senior management to line staff. According to the final evaluation, the PSRP fell short of its stated goals in terms of ESCOM operations and governance. Financial improvements resulting from increased tariffs (leading to pay down of commercial debt ESCOM owed) and conversion of debt owed by ESCOM to equity were relatively easy for ESCOM to achieve. However, initiating and sustaining operational improvements in more transaction-intensive activities proved much more complicated and challenging for a variety of reasons, including absorptive capacity challenges, resistance to behavior change, and continued deficiencies in corporate governance. An example of this is the low maintenance and capital investment budget execution, stemming from shortcomings in inventory planning and poor procurement delivery. Similarly, the final evaluation noted that initial gains in ESCOM's financial performance gradually eroded.

  Compact programming must recognize the challenges inherent in utility turnaround and dedicate sufficient resources and time with appropriate methodologies to achieve sustainable results. This means providing technical assistance in ways that moves from analysis and recommendations to actual implementation support, including skill development in employees through training and mentoring. These activities should take place over a period of time sufficient to support multiple rounds of implementation of new procedures, identification of challenges, and opportunities to adjust approaches.

  MCC is applying this lesson by, for example, focusing the technical assistance heavily on introducing a framework for improved utility management and process engineering upfront, with longer duration support for change management paired with more focused capacity building in specific technical areas that palpably improve the ability of the utility's line staff to perform their day to day tasks.

- ***Use the program logic to calibrate assumptions on reform outcomes and ensure results are both achievable and measurable.*** Based on PSRP evaluation findings,

program results for key reforms and operational improvements fell short of what was envisioned, and often occurred over a longer time period than expected. For instance, while the electricity tariffs are higher than it would have been without the compact, they have not achieved a level that allows for full cost recovery by ESCOM. In addition, given a lack of quality data prior to the compact, there was little reliable information on ESCOM's costs in supplying power, which limited the ability during compact development to accurately predict the impact of tariff reform activities. As data quality improved throughout the compact, PSRP stakeholders were able to obtain better measurements of cost recovery levels, while also gaining a clearer context for understanding of the likely magnitude of changes. This experience suggests that in cases where reliable data is limited, MCC country teams should make more cautious projections during early program design phases regarding the timing and prospects for reform impacts, and should develop early strategies to gather necessary data to inform target-setting.

Evaluation lessons:

- ***Evaluations of complex reform projects should target a concise set of evaluation questions and focus evaluation reports on the sub-set of questions most pertinent at the time of data collection.*** The PSRP evaluation was designed to answer 23 evaluation questions and it produced three evaluation reports: a process evaluation after the first year of program implementation, interim process evaluation and process mapping results after 3 years of program exposure, and a final process mapping after 5 years of exposure. Instead of having each report attempt to address the full set of evaluation questions at each stage, it may be beneficial to target each report that presents evaluation results on a sub-set of evaluation questions that are most relevant to the time at which data collection occurs. The evaluation requirements for PSRP called for the use of process evaluation methods in addition to stipulating the need to assess key outcomes at the regulatory, institutional and policy level within the power sector. Given MCC's interest in better understanding the effectiveness of various modalities for implementing reform programs, the use of process evaluation in particular yielded valuable insights that will inform the design of future compacts. However, the overall performance evaluation included a high number of evaluation questions, several of which focused on a narrow set of activities that were less central to the overall logic underlying the theory of change. For some evaluation questions, the findings echoed results reported from other activities but added little additional insight. While MCC and Malawian stakeholders derived significant learning from the varied findings and analyses, at times the length and number of individual reports was found to be overwhelming. Therefore, future MCC should collaborate with evaluators of future reform projects to carefully devise a set of evaluation questions focused on the core objectives of the project while also offering an improved understanding of implementation.

- ***Evaluations of reform projects should embrace the use of novel methods to assess changes in institutional performance that are most critical to the theory of change.***

Given the substantial number of activities focused on improving ESCOM's operational performance, the evaluation of PSRP leveraged an innovative process mapping method to examine several of the utility's core business practices, helping to augment the rigor of an evaluation that relied primarily on qualitative methods. In particular, the PSRP evaluation's use of workflow analyses aimed to provide a deeper view into the efficiency and effectiveness of critical functions at ESCOM such as billing and responding to outages, providing a basis for comparing changes over time and helping to pinpoint remaining weaknesses in key processes. However, since these analyses produced a large volume of information and data that did not significantly augment the evaluation's results narrative, any similar methods should be applied strategically to examine outcomes most critical to the program logic. Moreover, the theory of change for PSRP rested on assumptions beyond simply increased capacity at ESCOM, including changes in corporate governance and broader incentive structures among power sector institutions. Therefore, future evaluations of reform projects should consider a range of unique methods and strategies to gather evidence on key dimensions that drive improvements in institutional performance. This includes exploring measures of organizational capacity as well as the broader political economy and sector governance context.